State of Arizona

DEPARTMENT OF WATER RESOURCES

99 E. Virginia Avenue, Phoenix, Arizona 85004

BRUCE BABBITT, Governor
WESLEY E. STEINER, Director

January 18, 1982

Honorable James Watt
Secretary of the Interior
Department of the Interior
Washington, D.C. 20240

Dear Mr. Secretary:

Shortly after authorization of the Central Arizona Project, Secretary Udall asked the state of Arizona to recommend the allocation of CAP water among competing applicants. The responsibility for developing and forwarding the state's recommendations for the allocation of this important resource among the various potential users was assigned by the Governor to the Arizona Interstate Stream Commission, a predecessor agency of the Department of Water Resources. Before the state's recommendation could be developed, it was necessary for the Secretary to finalize the allocations of waters to the Central Arizona Indian tribes. On October 18, 1976, acting Secretary of Interior Frizzell finalized with minor amendments the allocation to Indian tribes promulgated earlier by Secretary Morton. The Arizona Water Commission then proceeded to develop its recommendations for allocation of the remaining supply among non-Indian users.

On June 22, 1977, the Water Commission sent to Secretary Andrus its recommended allocations of supplies to non-Indian M&I users. On August 31, 1979, the recommended allocation to non-Indian agricultural users was forwarded. At that time we felt that we had fulfilled our commitment to recommend apportionment of CAP supplies among non-Indian users in Arizona.

On August 8, 1980, Secretary Andrus published a proposed allocation to the Indian tribes which differed substantially from that recommended by Secretary Frizzell and thereby invalidated the state's recommended allocations.

On the basis of Secretary Andrus' proposed allocation to the Indians and understandings gained from meetings with the Secretary's staff, we proceeded to develop revised allocations to non-Indian users. Public hearings were held once again by the Arizona Water Commission and recommended allocations were made ready for transmittal to the Secretary. However, the Indian allocation finalized by Secretary Andrus on December 10, 1980 differed from our assumption in its treatment of priorities of Indian water and effluent exchanges, once again upsetting the validity of our proposed allocations.

6. The allocation be considered a first offering to potential sub-contractors and that the Department be requested to reallocate all supplies not contracted for.

The Department of Water Resources is recommending that 640,000 acre-feet of CAP supply be allocated to municipal and industrial sub-contractors. This is based on the Department's estimate that the firm water supply from the Central Arizona Project will be 630,000 acre-feet per year under year 2034 conditions and that at least 100,000 acre-feet of effluent will be provided to the Indian contractors as a substitute supply under provisions of their contracts with the Secretary of Interior. Allocation of this quantity also assumes that the users of CAP water, through conjunctive operation with other available supplies, will be able to withstand shortages in delivery of up to 20% of their contracted amount.

The nine contracts which have been entered into between the Secretary and the Indian tribes provide that 90% of the agricultural delivery and all of the tribal homeland allocations have a priority equivalent to non-Indian M&I uses. The proposed allocation to the Gila River Indian tribe grants 75% of the tribal allocation a priority equivalent to non-Indian M&I uses. As a result, a total of 258,323 acre-feet of Indian water will have a priority equal to non-Indian M&I. The contracts with the Indians also set forth the equation under which water supplies are to be allocated in times of shortage. This equation established an Indian allocation of 33.62% of the water supply after non-Indian agriculture has ceased to be supplied.

The recommended allocation of 640,000 acre-feet is derived from the Department's recommendation to distribute 800,000 acre-feet of M&I priority water. With effluent exchanges, the Indian allocation is about 160,000 acre-feet with normal water supply (258,323 - 100,000 = 158,323). This leaves only 640,000 acre-feet remaining from the 800,000 acre-feet to be distributed among non-Indian M&I applicants.

The selection of 800,000 acre-feet as the quantity to distribute is based on the Department's belief that the Colorado River water supply system should be stressed, but not to the point that M&I contracts establish delivery requirements that will necessitate extensive withdrawals from storage below minimum power pool in Lake Mead and/or will force substantial reductions below the firm yield of 630,000. The Department's proposal will cause users in year 2034 to be subject to a 20% shortage in supply about 36% of the time. This will occur at a time when users are receiving about 140 gallons per capita per day from all dependable supplies available and will necessitate additional drafts on groundwater and could impinge adversely on safe yield management goals then in effect. Based on these considerations, we question the management prudence, both fiscal and water-supply wise, of imposing a normal M&I demand in excess of 800,000 AF/YR under 2034 conditions.

The proposed exchange of effluent to allow allocation of a larger quantity of water is of vital importance. By the year 2005 it is estimated that approximately 280,000 acre-feet per year of effluent will be available from the Phoenix and Tucson metropolitan areas and that this amount will grow to approximately 460,000 acre-feet per year by year 2034. Less than 200,000 acre-feet of this amount are currently under contract. Hence, the conclusion that ample effluent will be available for exchange after the turn of the century. The Department's preliminary planning studies indicate that at least 100,000 acre-feet of exchange with the Indian tribes will prove engineeringly and economically feasible.

Since the fall of 1980, the Department's allocation of CAP water to M&I interests have been predicated on the assumption that 100,000 acre-feet of effluent exchange would be effected by the time shortages are expected to occur, with the benefits flowing proportionately to all M&I sub-contractors. In water short years, the municipal and industrial supply would be 100,000 acre-feet per year greater with the pooling concept than without. In normal and surplus water years, the supply available to non-Indian agriculture would be 100,000 acre-feet greater than without the pooling concept.

The major cities have objected that the pooling concept is confiscatory and unfair in that it removes from their jurisdiction a valuable resource and returns to the cities actually contributing the effluent for exchange less than an acre-foot for each acre-foot of effluent exchanged. They have expressed an interest in retaining the option to make the exhanges directly with the Indian reservation, with all the benefits rebounding to the entity making the exchange. We are recommending that the cities retain the option to exchange directly with the Indians, provided they pay all of the costs and their CAP contract entitlement is reduced in the amount of the exchange. The allocations are based upon distribution of CAP municipal water on an equal per capita basis to all sub-contractors. Each allocation is based on the anticipated population times a uniform per capita use rate minus all dependable water supplies otherwise available to the applicant. Exchange of effluent for a portion of the Indian's CAP supply would increase the dependable supply available to the applicant who opts to exchange directly rather than through the pool. If the sub-contractor's contractual entitlement with the CAWCD is not reduced by the amount of the exchange, the allocations would be distorted and the city making the exchange would receive more CAP water per capita than the cities and other users unable to effect exchange because of location.

Because the proposed exchange of effluent will require expanded responsibility for the Central Arizona Water Conservation District, the District Board of Directors has been asked to approve the concept. The Board has this matter under review.

Several conversions from agricultural to M&I purposes in the future must take into account the fact that the M&I applicnts will be serving water to new urban developments on lands which fall both within their intended service areas and those of irrigation districts allotted CAP agricultural supplies. Absent an adopted policy for conversion from agricultural to M&I contracts and absent the guarantee that all proposed agricultural contractors will sign for a CAP supply, it is not possible at this time to evaluate the extent that conversions will take place and reflect such conversions in the recommended allocations to M&I users. Potential M&I contractors who expand onto adjoining agricultural lands for which they were allotted a CAP supply will receive a disproportionately large supply of CAP water if granted an additional supply through conversion of agricultural supplies. This should not be allowed to happen. Contract provisions should include a mechanism to restrict conversions when M&I service was included in the original M&I allocation. The Secretary has the authority to approve or disapprove conversions. It is recommended that the sub-contracts be negotiated with agricultural contractors where the needs of anticipated populations have already been satisfied through the M&I allocatons, contain the provision that the Secretary will withhold approval of conversions on the lands covered by the M&I allocations. The attached Table 3 shows agricultural applicants which are expected to have lands urbanized and served CAP water by municipal contractors and the expected average to be served which have already been accounted for in the M&I allocations.

Population projections used in the allocation process are the official state projections as issued by the Arizona Department of Economic Security. The projections used herein were issued in 1979 and later adjusted to reflect the 1980 census. Other than the allocation to the State Land Department, all municipal allocations were derived from these projections.

Several of the applicants have complained that the population projections used in the allocation process are out of date and arbitrary, primarily because no population has been officially forecast for several new developments or the population forecasts for existing cities and private water companies are considered too low. Over the past 12 years that the Department, and the Arizona Water Commission before it, have been developing allocations, several different population projections have been utilized without effecting any significant change in distribution throughout the project service area. The differences in our allocations over the years have resulted from the amount of water supply allocated and the fact that each new projection enabled a few new developments to enter the allocation. New Department of Economic Security projections are scheduled to become available in late February. We do not anticipate that the new projections will cccasion any significant shift, but rather that population forecasts will generally increase over all of the project service area.

TABLE 1

Recommended Allocations of CAP Water to
Cities, Towns, and Water Service Organizations
(acre-feet/year)

APPLICANT	ALLOCATION 2034
Avondale	4099
Berneil Water Company	432
Big Valley Water Company	0[1/]
Buckeye	25[2/]
Camp Verde Water Company	1443
Carefree Ranch Water Company	954
Carefree Water Company	400
Cave Creek Water Company	1600
Chandler	3668
Chandler Heights Irrigation District	315
Chaparral City Water Company	6978
Clearwater Company	2849
Community Water Company of Green Valley	1100
Consolidated Water Utility	3932
Cortaro-Marana Irrigation District	47
Cottonwood Water Company	1789
Crescent Valley Water Company	2697
Del Lago Water Company	786
Desert Ranch Water Company	139
Desert Sage Water Company	5933
Desert Sands Water Company	768
Eagle Water Company	0[1/]
Eloy	2171
E & R Water Company	161
Farmers Water Company	0[3/]
Florence	1641
Florence Gardens	407
Flowing Wells Irrigation District	4354
Foothills Water Company	1652

APPLICANT	ALLOCATION 2034
Tempe	4315
Trails End Water Service	226
Tucson	151064 7/
Turner Ranches	3932
West End Water Company	157
West Phoenix Water Company	91
Williams Air Force Base	833
Youngtown	380
Arizona Water Company	
Apache Junction	6000
Casa Grande	8884
Coolidge	2000
Miami-Claypool	1829
White Tank	968
Citizens Utility Company	
Agua Fria	1439
Rio Rico	2683
Sun City	15835
TOTAL	494744

TABLE 2

Recommended Allocations of CAP water to the
Mining Industry, Power Companies, and Other Interests

(acre-feet/year)

APPLICANT	ALLOCATION	
	Early Years[1]	2034
POWER		
Arizona Electric Power Cooperative	0	0
Arizona Public Service-Salt River Project	55400	43218[2]
Tucson Electric Power	0	0
Power - Subtotal		43218
MINES		
Anamax-Helvetia	0	0[3]
Anamax-Twin Buttes	6105	4444
Asarco-Hayden	833	582
Asarco-Mission	4161	0[4]
Cities Service Company	3285	2271
Cyprus-Pima	7263	5339
Duval	11628	8549
Inspiration Copper	4647	2906
Kennecott	28611	22028
Phelps-Dodge	20866	14665
Mines - Subtotal		60784
RECREATION		
Arizona Game & Fish Department	755	324
Maricopa County	852	665
Recreation - Subtotal		988
OTHER		
Phoenix Memorial Park		5
Rio Salado		0[5]
State Land Department		39006
Other - Subtotal		39090
TOTAL		144080

TABLE 3

Recommended Allocations of CAP Water to Agricultural Applicants

(percent of available supply)

APPLICANT	ALLOCATION 1985	2005	2034
Arcadia Water Company	0.13	0.14	0.15
Avra Valley Association	3.69	3.84	4.21
Central Arizona Irrigation District	18.01	18.73	20.55
Chandler Heights Irrigation District	0.28	0.28	0.30
Cortaro-Marana Irrigation District	2.14	2.05	1.99
FICO	1.39	1.44	1.58
Harquahala Valley Irrigation District	7.67	7.98	8.75
Hohokam Irrigation District	6.36	6.61	7.25
La Croix	0.04	0.04	0.05
Maricopa-Stanfield Irrigation District	10.48	21.30	23.35
Marley, Kemper Jr.	0.04	0.04	0.05
McMicken Irrigation District	7.28	5.60	2.61
MCMWCD #1	4.66	3.37	2.88
New Magma Irrigation District	4.34	4.52	4.96
Queen Creek Irrigation District	4.83	4.99	5.42
Rood, W.E.	0.04	0.04	0.05
Roosevelt Irrigation District	2.61	2.72	2.98
RWCD	5.98	5.92	4.84
Salt River Project	2.97	3.05	0.00
San Carlos Irrigation District	4.09	4.25	4.66
San Tan Irrigation District	0.77	0.80	0.86
Tonopah Irrigation District	1.98	2.06	2.26
U.S. Forest Service	0.22	0.23	0.25
TOTAL	100.00	100.00	100.00